# Personnel Recovery Radio Programs

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# Outline

- Current Personnel Recovery Radios
- Future Personnel Recovery Radios
  - Goal: Reduce Total Ownership Cost
- CSEL
  - Navy Participation
  - Navy Concerns
- Other Personnel Recovery Systems
  - Man Overboard Indicator (MOBI)

# Current Personnel Recovery Radios

- Combat Search and Rescue Radios for Forward Deployed Troops
  - PRC-112
  - PRC-112B
- Search and Rescue Radio for Troops not Forward Deployed
  - PRC-90

# Current Radios Continued

- Beacon used in Tactical Aircraft Ejection Seats
  - URT-33
- Beacon used in Multi-place Life Rafts
  - PRT-5
- Radio used by Rescue Swimmers
  - PRC-125

# Future Personnel Recovery Radios

- Combat Search and Rescue Radio
  - PRQ-7 CSEL
- Search and Rescue Radio for Troops not Forward Deployed
  - PRC-149
- Rescue Swimmer Radio
  - PRC-149 with Pigtail

# Future Radios Continued

- Beacon for Ejection Seats in Tactical Aircraft
  - URT-140

# Total Ownership Cost Reduction for Naval Aviation

- Five unique legacy systems replaced by two new radios.
  - One Radio (PRC-149)
  - One Beacon (URT-140)
- Four unique military batteries replaced by two commercially available batteries.

# Navy Participation in CSEL Testing & Design

- Navy reps heavily involved with CSEL T&E
  - LT Rob Garcia, OPTEVFOR, is highly involved with Test IPT and all OT decisions, along with other Navy IPT members
  - High Navy participation in OA2 next year in HI theater: both land and shipboard ops + SEALs acting as both extraction teams and OPFOR
  - Initial testing last year involved Navy S/E's in the water in AK connecting to JSRC aboard USS ESSEX in San Diego
  - Julie Banner, NSWC Carderock, is primary battery tester for both safety certification and also performance testing against specs
- Navy reps also playing key roles in system complexity Tiger Teams
  - HMC T. Dallas-Orr, ALSS Instructor and Certified CSEL Trainer, member of HHR Menu Simplification Study: new screen structure just adopted as CSEL baseline - resulted from comments in last year's OA of EMD models
  - Mr. Ron Bell, SSC San Diego senior engineer involved with CSEL system design from beginning of program, will be a member of System Architecture Complexity Study just getting under way: will examine over system networking and data transfer issues for best possible solutions using lessons learned in testing to date

# Navy Concerns with CSEL

- Cost Realism
  - Cost of handheld
    - Overly complex design driving cost
  - Cost of Ownership
    - Batteries
- Ground Segment
  - Maintenance costs
  - Network infrastructure/GCCSM Segments
- Needs airborne interrogation capability

# Other Navy Personnel Recovery Programs

- Man Overboard Indicator (MOBI) and Personnel Tracking and Monitoring System (PTMS)
  - Actively signal man overboard
  - Looking at various COTS/GOTS technologies
  - Send physiological telemetry

# V-22 Osprey for Extraction

- Pros
  - Fast
  - Able to hover
- CONS
  - Big Target
  - Unable to defend itself
  - Expensive
  - Personnel Access

# CSEL Risks:
# Impacts and Mitigation

- Cost is medium risk due to current unit cost projections being higher than ORD threshold for full production rate, and because current battery design costs requires overly large O&M,N budget
  - Average HHR Unit cost is projected at $500 over ORD Threshold of $5000/radio: that cost did not include added requirements of SAASM, DAMA-C, or NSA security module
  - Battery design currently under review. Proposed relaxation in JORD requirements would give more options for reduced unit cost + large lot sizes due upon commencement of full production will reduce current battery cost 55%
- Software risk is medium due to uncertainty of timely development of DII COE compliant JSRC GCCS software
  - Impact would be lack of GCCS-M compatible C2 software on Navy platforms at time of MS-III decision date
  - CSEL JPO recently approved contract for completion of CSEL development including full DII COE compliance. JPO is confident that approved baseline schedule can be met
- Performance risk assessment is medium due to lack of LOS data capability (like DALS/PLS) and untested status of full UBS and new HHR module designs
  - Impact of no LOS data is loss of current capability of AN/PRC-112 radio
  - Mitigation - LOS data path is new requirement in Joint ORD currently being staffed, with capability to be Pre-Planned Product Improvement (P3I)
  - Full UBS and new HHR modules due to be tested in OA2 (9/ 00), with DAMA-C UBS testing in IOT&E (FY02)